Docket No.: 1793.1189

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Hai JIN et al.

Serial No. 10/763,422 Group Art Unit: 2443

Confirmation No. 4539

Filed: January 26, 2004 Examiner: Mark D. Fearer

For: VIDEO SPLITTING AND DISTRIBUTED PLACEMENT SCHEME FOR CLUSTERED VIDEO SERVERS

APPEAL BRIEF

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In a Notice of Appeal and Pre-Appeal Brief Conference Request filed February 2, 2010, the Applicants appealed the Examiner's October 2, 2009 Office Action finally rejecting claims 1, 2, 4-7, 9-15, 17-20 and 22-27. The Decision in response to the Pre-Appeal Brief Conference Request was issued on March 23, 2010. Therefore, Appellant's Brief is due April 23, 2010 (the later of two months from the filing of the Notice of Appeal or one month from the mail date of the Decision). Appellant's Brief, together with the requisite fee set forth in 37 C.F.R. §1.17 and a Petition for a one-month extension of time, is submitted herewith.

TABLE OF CONTENTS

I. Real Party in Interest (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this Appeal is Samsung Electronics Co., Ltd., the assignee of the subject application.

II. Related Appeals and Interferences (37 C.F.R. § 41.37(c)(1)(ii))

Appellants, Appellants' legal representatives, and the assignee are not aware of any other appeals or interferences which will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending Appeal.

III. Status of Claims (37 C.F.R. § 41.37(c)(1)(iii))

Appealed claims 1, 2, 4-7, 9-15, 17-20 and 22-27 have been rejected and are appealed. Claims 3, 8, 16 and 21 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form. Claims 1-27 are the only pending claims in the subject application.

IV. Status of Amendments (37 C.F.R. § 41.37(c)(1)(iv))

Appellants' Response filed December 2, 2009 was considered for purposes of Appeal as indicated by the Advisory Action mailed December 22, 2009.

V. Summary of Claimed Subject Matter (37 C.F.R. § 41.37(c)(1)(v))

Referring to Figs. 1 and 2, pp. 8-10, paragraphs 0025-0035 and pp. 13-17, paragraphs 0051-0095, the present invention relates to a method of video splitting and allocation for clustered video servers. The method of independent claim 1 includes defining a structure of a network packet 12, a structure of a distributed control file 13, and a structure of a clip file 14 (see Fig. 1, p. 8, paragraph 0025, lines 1-4, and pp. 9-12, paragraphs 0032-0042, for example). The method further includes analyzing information of streaming media source files 18, and processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting (see Figs. 1 and 2, p. 8, paragraph 0025, lines 4-8, p. 8, paragraph 0027, and pp. 15-16, paragraphs 0080-0084, for example). The method additionally includes defining a split files placement strategy 17 and analyzing a clip file allocating requirements, according to the client's requirements (see Figs. 1 and 2, pp. 13-15, paragraphs 0051-0079, for example). The method also includes analyzing the streaming media source files 18 to construct a splitting task list and relevant control files, according to the client's requirements (see Figs. 1 and 2, pp. 15-16, paragraphs 0080-0085, for example). The method further includes creating several threads to split the streaming media source files 19, 25, wherein each thread is responsible for splitting a streaming media source file (see Figs. 1 and 2, p. 8, paragraph 0025, lines 7-8 and pp. 16-17, paragraphs 0086-0092, for example). The method also includes distributing the clip files to relevant storage server nodes 20, 26, according to the split files placement strategy (see Figs. 1 and 2, p. 8, paragraph 0025, line 8 and p. 17, paragraphs 0093-0095, for example).

Referring to Figs. 1 and 2, pp. 8-10, paragraphs 0025-0035 and pp. 13-17, paragraphs 0051-0095, the present invention relates to a computer readable medium encoded with processing instructions for performing a method of splitting and allocating streaming media source files. The method of independent claim 14 includes defining a structure of a network packet 12, a structure of a distributed control file 13, and a structure of a clip file 14 (see Fig. 1, p. 8, paragraph 0025, lines 1-4, and pp. 9-12, paragraphs 0032-0042, for example). The method further includes analyzing information of streaming media source files 18, and processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source

files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting (see Figs. 1 and 2, p. 8, paragraph 0025, lines 4-8, p. 8, paragraph 0027, and pp. 15-16, paragraphs 0080-0084, for example). The method additionally includes defining a split files placement strategy 17 and analyzing a clip file allocating requirements, according to the client's requirements (see Figs. 1 and 2, pp. 13-15, paragraphs 0051-0079, for example). The method also includes analyzing the streaming media source files 18 to construct a splitting task list and relevant control files, according to the client's requirements (see Figs. 1 and 2, pp. 15-16, paragraphs 0080-0085, for example). The method further includes creating several threads to split the streaming media source files 19, 25, wherein each thread is responsible for splitting a streaming media source file (see Figs. 1 and 2, p. 8, paragraph 0025, lines 7-8 and pp. 16-17, paragraphs 0086-0092, for example). The method also includes distributing the clip files to relevant storage server nodes 20, 26, according to the split files placement strategy (see Figs. 1 and 2, p. 8, paragraph 0025, line 8 and p. 17, paragraphs 0093-0095, for example).

Referring to Figs. 1 and 2, pp. 8-10, paragraphs 0025-0035 and pp. 13-17, paragraphs 0051-0095, the present invention relates to a method of splitting and allocating streaming media source files. The method of independent claim 27 includes capturing information of the streaming media source files 15 and capturing client's requests information 16 (see Figs. 1 and 2, p. 8, paragraph 0025, lines 4-6 and pp. 12-13, paragraphs 0046-0050, for example). The method further includes obtaining a splitting requirement of the streaming media source files into clip files based on the client's requests information, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting (see Figs. 1 and 2, p. 8, paragraph 0025, lines 4-8, p. 8, paragraph 0027, and pp. 15-16, paragraphs 0080-0084, for example). The method additionally includes creating data placement strategies and analyzing the streaming media source files and creating task lists (see Figs. 1 and 2, pp. 13-15, paragraphs 0051-0079, for example). The method further includes splitting the streaming media source files into clips and transmitting and storing the clips in the servers (see Figs. 1 and 2, p. 8, paragraph 0025, lines 7-8 and pp. 16-17, paragraphs 0086-0095, for example).

VI. Grounds of Rejection to be Reviewed on Appeal (37 C.F.R. § 41.37(c)(1)(vi))

The rejection of claims 1, 5-7, 11, 14, 18-20, 24 and 27 under 35 U.S.C. § 103(a) over U.S. Patent No. 5,668,948 to Belknap et al. in view of U.S. Publication No. 2002/0145702 to Kato et al. and further in view of U.S. Patent No. 4,680,630 to Field is to be reviewed on appeal.

The rejection of claims 2, 4, 9, 10, 12, 13, 15, 17, 22, 23, 25 and 26 were rejected under 35 U.S.C. §103(a) over Belknap, Kato, Field and U.S. Publication No. 2003/0236912 to Klemets et al. is to be reviewed on appeal.

VII. Argument (37 C.F.R. § 41.37(c)(1)(vii))

The References

Belknap

Belknap discusses a media streamer 10 that includes a storage node 16, 17 that stores a digital representation of a video presentation, the video presentation requiring a time T to present and being stored as a plurality of N data blocks, each data block storing data corresponding approximately to a T/N period of the video presentation (see col. 3, lines 1-7). The media streamer 10 includes at least one control node 18 coupled to a plurality of communication nodes and to the storage node for enabling any one of the N blocks to appear at any output port of any of the communication nodes (see col. 3, lines 15-23). Belknap further discusses that the control node breaks the incoming data file into segments and spreads it across one or more storage nodes (see col. 8, lines 40-42). Material density and the number of simultaneous users of the data affect the placement of the data on the storage nodes 16, 17 (see col. 8, lines 42-44). When commands are issued to start the streaming of data, control node 18 selects and activates an appropriate communication node 14 and passes control information indicating to it the location of the data file segments on the storage nodes 16, 17 (see col. 8, lines 47-51).

Kato

Kato discusses a user's ability to edit an AV stream in which, if it is desired to specify a playback domain for the AV stream, for example, if desired to create a playback route of reproducing a portion sung by a singer A from a song program A, and subsequently reproducing a portion sung by the same singer A from another song program B, the information pertinent to the beginning point and an end point of the playback domain is input to the controller 23, which creates a database of the group (PlayList) of playback domains (PlayItem) of the AV streams (see p. 6, paragraph 0159). Kato further discusses that a user is able to specify playback domains of an AV stream recorded on the recording medium to create a new playback route and to interconnect the respective playback domains in a seamless fashion by using the controller 23 to partially re-encode and re-multiplex the video stream in the vicinity of function points of the playback domains (see p. 6, paragraph 0161).

Field

Field discusses an apparatus for processing digital video signals to produce a television image by line and field sequential scanning. In Field, a video input signal is applied at input and fed to a splitting circuit which produces streams of even and off numbered samples, both an a sampling rate (see Abstract, lines 5-8). The input signal is fed via a path 3 to a splitting circuit 4, which produces from the input video signal two separate sample streams, one with even numbered samples and the other with odd numbered samples (see col. 6, lines 3-7). Field further discusses that the set of addresses generated from input signals define a given geometrical modification of the television picture represented by the input video signal samples, and the samples that are interpolated form a series of video signal samples which represent a modified television picture (see col. 18, lines 39-41, 50-53).

Klemets

Klemets discusses a system and method for embedding a streaming media format header within a session description message (see Abstract, lines 1-2)

Independent Claims 1, 14 and 27

Independent claim 1 recites a method of video splitting and allocation for clustered video servers, including:

> processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files,...the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting...,

and independent claims 14 and 27 recite similar features.

The Examiner concedes that Belknap does not discuss or suggest processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting. The Examiner indicates that Kato and Field make up for the deficiencies in Belknap.

The Examiner alleges that Kato discloses a splitting requirement of the streaming media source files into clip files, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting.

A splitting requirement is inherently the requirement for how to split the streaming media source files into clip files – i.e., the manner in which they are split. Kato discusses that a user is able to specify playback domains (PlayItem) of an AV stream recorded on the recording medium to create a new playback route and to interconnect the respective playback domains (see p. 6, paragraph 0161). For example, if it is desired to create a playback route of reproducing a portion sung by a singer A from a song portion A and a portion sung by singer A from a song portion B, the user is able to do so. Thus, Kato only suggests connecting specific clip files in a new manner. Kato does not, however, suggest processing a client's requirement to obtain a splitting requirement, where a user's requirements therefore specify whether the clip placement is to be based on clip time or based on quantity of clip splitting.

When clip placement is based on clip time, the video files are divided into several parts with the same time length. When clip placement is based on quantity of clip splitting, the video files are divided into several parts with the same file size. The former is based on the same time length, the latter is based on the same space. The present invention analyzes a client's requirements to determine which type of clip placement is best suited for the client.

Kato only discusses that a user is able to select specific playback domains and then creates a new playback route using those selected playback domains. Kato does not, however, suggest that a client's requirements are analyzed in order to determine the splitting requirement, which is inherently how it is required to split the media source files, i.e., either by clip time length or clip time size. Kato is merely concerned with editing an AV stream, but Kato does not suggest that the way the AV stream is edited is in a particular manner or that a client's requirements are analyzed to determine a specific splitting requirement, particularly as to either a splitting requirement based on time and a splitting requirement based on quantity of clip splitting. While the editing of the AV stream involves the user selecting start and end time points, Kato does not suggest processing a client's requirements to obtain a splitting requirement, which indicates how to split the media source files. Merely causing the files to be split based on a user's indication of a specific song portion, for example, is not processing a client's requirements to obtain a splitting requirement for how to split media source files into clip files.

Further, while Kato discusses that a user edits an AV stream in a specific way, by deciding how to create a playback route of song portions, Kato does not suggest setting the requirement for how, or the manner in which, media files are to be split.

The present invention, on the other hand, analyzes a client's requirements to determine whether to split the media source files by time or by quantity of clip splitting. For example, as discussed at paragraph 0027 of the present specification, the requests of clients are chosen according to some key parameters – one is that the clients can define how many clip files according to the quantity of splitting and the other is to regulate the playing time of the clip time to obtain the whole playing time of the media files. Thus, the present invention first determines what the client's requirements are – if the client has defined a number of clip files or the playing time of the clip – in order to determine how the media source files should be split.

Independent claim 1 recites a method of video splitting and allocation for clustered video servers, including:

> ...to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split,

and independent claims 14 and 27 recite similar features.

Although a splitting requirement is inherently the manner in which media source files are split, the Examiner concedes that neither Belknap nor Kato, alone or in combination, suggest obtaining a splitting requirement which is the manner in which the media source files are split, but indicates that Field makes up for the deficiencies in Belknap and Kato.

Field is directed to an apparatus for processing digital video signals to produce a television image by line and field sequential scanning, in which a video input signal is applied at input and fed to a splitting circuit which produces streams of even and odd numbered samples, both at the sampling rate (see Abstract).

Splitting a video input signal into samples to be used in creating a television picture is not splitting streaming media source files into clip files. The splitting concept of Field only indicates how a television picture is to be produced, but not how to split streaming files into clip files. It is to be noted that the term "clip file" is a term of art known to those of ordinary skill in the art, the term meaning a segment of a streaming media file.

Field is not directed to generating clip files, but is directed to generating samples (e.g., field 1 odd samples, field 1 even samples, field 2 odd samples, field 2 even samples) used to produce a television image. In particular, video signals are split into odd and even numbered samples in order to generate RGB color signals for a display. Splitting video signals to be able

to generate a television image is not splitting a media source file into clip files. The samples are not clip files, which are merely segments of the entire media source file itself.

In contrast, the present invention obtains a splitting requirement of the manner in which clip files are to be split in order to determine whether clip placement should be based on clip time or whether it should be based on quantity of clip splitting. As the present invention analyzes a client's requirements, the present invention therefore determines what the splitting requirement of splitting the media source files into clip files should be (i.e., based on clip time v. based on quantity of clip splitting).

Independent claim 1 recites a method of video splitting and allocation for clustered video servers, including:

> ...to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split,

and independent claims 14 and 27 recite similar features.

Neither Belknap, Kato nor Field suggest defining a split files placement strategy according to the client's requirements. Belknap, Kato and Field do not analyze a client's requirements. Thus, neither Belknap, Kato nor Field is able to define a split files placement strategy according to client's requirements because the client's requirements are not processed to determine what it is the client needs (i.e., is it preferential for the client to utilize a splitting method based on time or based on space).

Apparent Reason

i. Belknap and Kato

The Examiner alleges that it would have been predictable to incorporate Kato into Belknap, because "one skilled in the art would have readily recognized a system and method of producing quality streaming video." "[To] produc[e] quality streaming video" does not suggest why one of ordinary skill in the art would have combined the teachings of Belknap and Kato. Merely reciting that "one skilled in the art would have readily recognized a system and method of producing quality streaming video" does not establish a *prima facie* case of obviousness and does not provide the requisite rational underpinning required by KSR International v. Teleflex, 550 U.S. 398 (2007).

ii. Belknap, Kato and Field

The Examiner alleges that Belknap, Kato and Field should be combined because "one of ordinary skill in the art would have readily recognized a system and method for processing digital video signal to produce sequential scanning." The Applicants respectfully disagree. "To produce sequential scanning" is an apparent reason for producing a television image, for example, by generating samples (field 1 odd samples, field 1 even samples, field 2 odd samples, field 2 even samples). However, Belknap and Kato are directed to streaming media and clip files, while Field is directed to producing a television image and is not directed to splitting streaming media files into clip files. Thus, "[t]o produce sequential scanning" does not provide an apparent reason with rational underpinning as to why Belknap and Kato should be modified to suggest obtaining a splitting requirement of streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting, particularly because Field is not directed to splitting media source files into clip files.

The apparent reason cited by the Examiner does not suggest why the clip files of Kato, for example, would be split in a specific manner, particularly based on a client's requirements. "To produce sequential scanning" does not address why one of ordinary skill in the art would determine how, or the manner in which, streaming media files should be split because sequential scanning is unrelated to clip files and is unrelated to how a streaming media file is split up into clip files. "To produce sequential scanning" only relates to how a television image is produced, but is not related to how streaming media files are split into clip files. Generating odd and even field samples relate to creating a television image, and do not relate to splitting a streaming file into clip files.

Dependent Claims 11, 12, 24 and 25

Dependent claims 11 and 24 recite that "the client's requirements include obtaining and analyzing splitting time requirements and clip placement strategy." Dependent claims 12 and 25 recite that "the clip placement strategy includes a data placement strategy, a hot level of a source video, and an algorithm for allocating clips to the relevant storage server nodes."

Neither Belknap, Kato, Field or Klemets suggest analyzing splitting time requirements of the client. In addition, neither Belknap, Kato, Field or Klemets suggest that a clip placement

strategy includes a data placement strategy, a hot level of a source video and an algorithm for allocating clips to the relevant storage server nodes. Belknap merely discusses the placement and distribution of content across storage media, but Belknap does not suggest a strategy for the data placement.

In contrast, the present application at paragraph 0052, for example, suggests a client's requirements that include a data placement strategy. For example, the system of the present invention provides a data placement strategy with client control. First, a typical data placement strategy is provided round robin; second, hot level options of films are given by clients and can be used to decide the replicas of each clip of one film, and finally the system can finish the distributed storage of all clip files of films according to the above information provided by clients. Belknap does not suggest that the clients provide a specific requirement, which is used to determine a data placement strategy.

Conclusion

Therefore, as the combination of Belknap, Kato and Field does not suggest all the features of independent claims 1, 14 and 27, and the combination of Belknap, Kato, Field and Klements does not suggest all the features of dependent claims 11, 12, 24 and 25, claims 1, 11, 12, 14, 24, 25 and 27 patentably distinguish over the references relied upon.

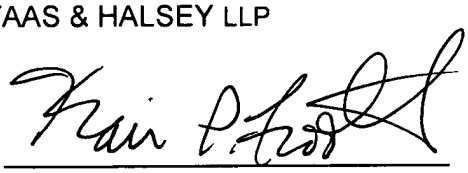
Claims 2, 4-7, 9, 10, 13, 15, 17-20, 22, 23 and 26 depend either directly or indirectly from independent claims 1 and 14. Therefore, claims 2, 4-7, 9, 10, 13, 15, 17-20, 22, 23 and 26 patentably distinguish over the references relied upon for at least the reasons claims 1 and 14 patentably distinguish over the reference relied upon.

In summary, the Applicants submit that claims 1, 2, 4-7, 9-15, 17-20 and 22-27 patentably distinguish over the references relied upon. Accordingly, the Applicants respectfully request reversal of the Examiner's rejections.

The Commissioner is authorized to charge any Appeal Brief fee or Petition for Extension of Time fee for underpayment, or credit any overpayment, to Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: May 24, 2010 By: 

Kari P. Footland
Registration No. 55,187

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

VIII. Claims Appendix (37 C.F.R. § 41.37(c)(1)(viii))

1. (PREVIOUSLY PRESENTED) A method of video splitting and allocation for clustered video servers, the method comprising:

defining a structure of a network packet, a structure of a distributed control file, and a structure of a clip file;

analyzing information of streaming media source files, and processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting;

defining a split files placement strategy and analyzing a clip file allocating requirements, according to the client's requirements;

analyzing the streaming media source files to construct a splitting task list and relevant control files, according to the client's requirements;

creating several threads to split the streaming media source files, wherein each thread is responsible for splitting a streaming media source file; and

distributing the clip files to relevant storage server nodes, according to the split files placement strategy.

2. (ORIGINAL) The method of claim 1, wherein the streaming media source files include an Index file and a Session Description Protocol (SDP) file.

3. (ORIGINAL) The method of claim 2, wherein the Index File includes a transmitting task list, a file name of a video source, a storage space of the video source, a time length of the video source, a clip file number of the video source, and a hot spot of the video source.

4. (ORIGINAL) The method of claim 2, wherein the SDP file includes a media type, a number of streams included in a video source, a time length of the video source and an ID of a streaming session.

5. (ORIGINAL) The method of claim 1, wherein the structure of the clip files includes a header of the clip files, an information header of media streams, and the network packet of a media streaming service.

6. (ORIGINAL) The method of claim 1, wherein the analyzing of the streaming media source files includes, analyzing a number of logical time units in the media source files, and obtaining time information of a header and a number of media stream for each logic time unit.

7. (ORIGINAL) The method of claim 6, further comprising repeating the analysis until all the logic time units are finished and obtaining a total playback duration, a storage space of the media source files, and an ID of the media source files based on the structure of the clip file.

8. (ORIGINAL) The method of claim 1, wherein the splitting task list is produced by analyzing the media source files to find a space and time deviation of each clip file and a range of a serial number of the network packet.

9. (ORIGINAL) The method of claim 2, wherein the splitting of the media source file comprises reading the Index file to obtain a number of clips, and creating several threads according to the obtained number.

10. (ORIGINAL) The method of claim 9, further comprising reading the Index file and obtaining a play task list including several items, and sending each item in the play task list to relevant threads creating a splitting task.

11. (ORIGINAL) The method of claim 1, wherein the client's requirements include obtaining and analyzing splitting time requirements and clip placement strategy.

12. (ORIGINAL) The method of claim 11, wherein the clip placement strategy includes a data placement strategy, a hot level of a source video, and an algorithm for allocating clips to the relevant storage server nodes.

13. (ORIGINAL) The method of claim 1, wherein the structure of the network packet complies with a streaming media data message in international real-time transmission protocol, including media type head, serial number, time stamp, synchronous signal, and main media data.

14. (PREVIOUSLY PRESENTED) A computer readable medium encoded with processing instructions for performing a method of splitting and allocating streaming media source files, the method comprising:

defining a structure of a network packet, a structure of a distributed control file, and a structure of a clip file;

analyzing information of streaming media source files, and processing a client's requirements to obtain a splitting requirement of the streaming media source files into clip files, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting;

defining a split files placement strategy and analyzing a clip file allocating requirements, according to the client's requirements;

analyzing the streaming media source files to construct a splitting task list and relevant control files, according to the client's requirements;

creating several threads to split the streaming media source files, wherein each thread is responsible for splitting a streaming media source file; and

distributing the clip files to relevant storage server nodes, according to the split files placement strategy.

15. (ORIGINAL) The computer readable medium of claim 14, wherein the streaming media source files include an Index file and a Session Description Protocol (SDP) file.

16. (ORIGINAL) The computer readable medium of claim 15, wherein the Index File includes a transmitting task list, a file name of a video source, a storage space of the video source, a time length of the video source, a clip file number of the video source, and a hot spot of the video source.

17. (ORIGINAL) The computer readable medium of claim 15, wherein the SDP file includes a media type, a number of streams included in a video source, a time length of the video source and an ID of a streaming session.

18. (ORIGINAL) The computer readable medium of claim 14, wherein the structure of the clip files includes a header of the clip files, an information header of media streams, and the network packet of a media streaming service.

19. (ORIGINAL) The computer readable medium of claim 14, wherein the analyzing of the streaming media source files includes, analyzing a number of logical time units in the media source files, and obtaining time information of a header and a number of media stream for each logic time unit.

20. (ORIGINAL) The computer readable medium of claim 19, further comprising repeating the analysis until all the logic time units are finished and obtaining a total playback duration, a storage space of the media source files, and an ID of the media source files based on the structure of the clip file.

21. (ORIGINAL) The computer readable medium of claim 14, wherein the splitting task list is produced by analyzing the media source files to find a space and time deviation of each clip file and a range of a serial number of the network packet.

22. (ORIGINAL) The computer readable medium of claim 15, wherein the splitting of the media source file comprises reading the Index file to obtain a number of clips, and creating several threads according to the obtained number.

23. (ORIGINAL) The computer readable medium of claim 22, further comprising reading the Index file and obtaining a play task list including several items, and sending each item in the play task list to relevant threads creating a splitting task.

24. (ORIGINAL) The computer readable medium of claim 14, wherein the client's requirements include obtaining and analyzing splitting time requirements and clip placement strategy.

25. (ORIGINAL) The computer readable medium of claim 24, wherein the clip placement strategy includes a data placement strategy, a hot level of a source video, and an algorithm for allocating clips to the relevant storage server nodes.

26. (ORIGINAL) The computer readable medium of claim 14, wherein the structure of the network packet complies with a streaming media data message in international real-time transmission protocol, including media type head, serial number, time stamp, synchronous signal, and main media data.

27. (PREVIOUSLY PRESENTED) A method of splitting and allocating streaming media source files, the method comprising:

capturing information of the streaming media source files;

capturing client's requests information;

obtaining a splitting requirement of the streaming media source files into clip files based on the client's requests information, the splitting requirement being the manner in which the media source files are split, the splitting requirement being one of clip placement based on clip time and clip placement based on quantity of clip splitting;

creating data placement strategies;

analyzing the streaming media source files and creating task lists;

splitting the streaming media source files into clips; and transmitting and storing the clips in the servers.

28. (CANCELLED)

IX. Evidence Appendix (37 C.F.R. § 41.37(c)(1)(ix))

None

X. Related Proceedings Appendix (37 C.F.R. § 41.37(c)(1)(x))

None